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Inflectional economy and politeness : morphology-internal and morphology-external factors in the loss of second person marking in Dutch

Aalberse, S.P.

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Chapter 2

Sources of syncretism

1 Introduction

Syncretism is the use of one form to express multiple morphosyntactic functions (Baerman, Brown & Corbett 2005: 204). In chapter 1, we saw that there are decided tendencies in the patterning of syncretism, but that it is impossible to formulate a restrictive model of syncretisms that can account for all variation in verbal inflection. Every syncretic pattern seems to be possible, but not every syncretic pattern is equally likely to occur (Baerman, Brown & Corbett 2005: 169-170, Cysouw 2005: 250). We hypothesized that distinguishing different sources of syncretism will enable us to account for the observation that some syncretic patterns are more likely to occur than others and for the observation that every constraint on the formation of syncretism can be overruled. Frequently occurring syncretisms are morphologically systematic, whereby exceptions are triggered by non-morphological factors such as phonology.

At first sight, it might seem that combining various theories into a single explanation derives a theory which is difficult to falsify. The goal of this chapter is to provide a framework which systematically distinguishes sources of syncretism on the basis of empirical evidence. In section 2, we present some cross-linguistic tendencies in syncretic patterning which are related to language acquisition. Special attention is paid to features that play a role in the present indicative paradigm of Dutch, namely person and number.

In sections 3 and 4, we describe sources of syncretism outside the morphological system. More specifically, in section 3, we present empirical data outlining the role of phonology in the formation of syncretisms. In section 4, we see that both grammar-internal and grammar-external sources can yield syncretisms. In the discussion, we focus on the role of politeness and finally, in section 5, we offer a summary of the results in the previous sections.

2 Morphology-internally motivated syncretisms

The central claim of this section is that syncretisms reflect a systematic reduction of feature specification in morphology. A first argument in favour of the position that some syncretisms are morphologically systematic is based on the observation that some forms of deflection have no motivation outside morphology. Spontaneous

deflection is deflection that cannot be attributed to a non-morphological source, i.e. phonology. One example of spontaneous deflection is attested in the oceanic language Anejom (Lynch 2000: 91-95 in Baerman, Brown & Corbett 2005: 73) In nineteenth century Anejom, there were fifteen different attestations of the aorist auxiliary, as shown in (1). Three person distinctions were encoded in the singular, the dual, the trial and the plural. In addition, first person plural, dual and trial also have a separate inclusive form.

Lynch (2000) hypothesizes that twentieth century Anejom is moving towards a system where the third person plural form is used for all non-singular persons: duals, trials and the inclusive forms are no longer marked and there is no person marking in the plural. The spontaneous loss of duals and trials and person marking all in favour of the third person plural form cannot be related to phonology or another non-morphological source. Moreover, the predominance of third person plural markers in all non-singular contexts corresponds with typologically common syncretic patterns (Baerman, Brown & Corbett 2005: 169). Two observations suggest that this new syncretism is morphologically systematic: First, the lack of non-morphological motivations in explaining the predominance of third person plural markers; and second, the fact that the new syncretic pattern corresponds with typologically common patterns.

- (1) Anejom aorist auxiliary (Lynch 2000: 91-95 in Baerman, Brown & Corbett: 73)

	19 th century	>	20 th century
1 singular	ek		ek
2 singular	na		na
3 singular	et		et
1 inclusive dual	intau		era
1 dual	ecrau		
2 dual	ekau		
3 dual	erau		
1 inclusive trial	intaj		
1 trial	ektaj/ektij		
2 trial	ahtaj		
3 trial	ehtaj		
1 inclusive	inta		
1 plural	ecra		
2 plural	eka		
3 plural	era		

In Anejom, we have seen a reduction of the number of form variants used in the language. Haugen (1987) and Helmbrecht (2005) show that it is also possible to reorganize the inflectional categories without a loss of form variants. When second person plural forms began to be used as polite singular forms in Icelandic, the original plural form was reanalyzed as a singular form (Haugen 1987, Helmbrecht 2005). Once the original plural form lost its plural connotation, the original marker of the dual was reinterpreted as a general plural marker. The category dual was thus lost in Icelandic, without a reduction of the total inventory of form variants. Instead of losing a suffix, the original second person plural was reanalyzed as an honorific singular form and the original dual form was reanalyzed as a plural form. Although an externally motivated source (politeness) can explain the reinterpretation of the original plural form as a singular form, the reinterpretation of the dual form as a plural form was not related to an external source. Instead, feature structure should explain the internally motivated changes.

If there is a universal source of syncretism that corresponds with a systematic reduction of feature specifications in morphology, we expect cross-linguistic similarities in syncretic patterning. This prediction is borne out. Although a wide range of different syncretic patterning is possible, it is clear that the presence of syncretisms is not random. (Baerman, Brown & Corbett 2005: 169-170, Cysouw 2005: 250). Baerman (2005: 808) and Baerman & Brown (2005a: 118, 2005b: 122) show that syncretism is pervasive in languages with inflectional morphology. In their language sample, roughly two-fifths of the languages investigated (60 out of 140), subject person marking alone is neutralized in some contexts. The pervasive presence of syncretisms is in line with the hypothesis that syncretisms are a systematic part of inflectional morphology.

In short, we claim that there is a universal source for the systematic reduction of feature specification in inflectional morphology. We will refer to this universal source of systematic reduction as feature structure. Feature structure can explain the patterning of spontaneous changes in the inflectional system. Moreover, we can link cross-linguistically frequent syncretic patterns to feature structure.

In order to relate feature structure to cross-linguistic frequent patterns in syncretisms, we need to know more about cross-linguistic patterning. In 2.1 some observations on cross-linguistic tendencies in verbal inflection and syncretic patterning are described. The next question is how feature structure is organized. In 2.2, we link feature structure to learnability. The hypothesis is that deflection that is motivated by feature structure is a systematic reduction of features anticipated by language learners. In 2.3, we discuss the circumstances where we expect morphology-internally motivated deflection.

2.1 Some cross-linguistic tendencies in verbal inflection and syncretisms

In this subsection, we look at some cross-linguistic tendencies in syncretism. Before we turn to the actual data, I will briefly discuss some relevant studies from which our observations are taken. Specifically, we will discuss the following studies: *The Syntax-Morphology Interface: a Study of Syncretism* by Baerman, Brown & Corbett (2005), *Dependencies between Grammatical Systems* by Aikhenvald & Dixon (1998), *The Paradigmatic Structure of Person Marking* by Cysouw (2003), *Person and Number in Pronouns: A Feature-Geometric Analysis* by Harley & Ritter (2002), *Distributed Optimality* by Trommer (2005) and *Morphology: A Study of the Relation between Meaning and Form* by Bybee (1985).

Baerman, Brown & Corbett (2005) used two samples in their study: The first sample is *The Surrey Syncretism Database*. It consists of 30 languages which were selected to avoid genetic and geographic biases, with the inclusion criteria that each language must show instances of syncretism (Baerman 2002). The second sample is created for the *World Atlas of Language Structures*, which consists of 200 languages which were also chosen to avoid genetic and aerial biases (cf. Haspelmath & Bibiko 2005).

The work by Cysouw (2003, 2005) is backed by a sample of 309 languages. One of Cysouw's goals was to present a wide range of possibilities for person marking among the world's languages. He included languages from every geographic region and every genetic family. In order to further diversify his sample, Cysouw included all rare paradigmatic structures that he could find. This means that rare structures are (intentionally) over-represented in this sample. An overview of the languages in Cysouw's sample can be found in Cysouw (2003: 350-359).

Aikhenvald & Dixon (1998) used a convenience sample of more than 500 languages. Bybee's (1985: vi) work is based on Perkin's stratified probability sample of 50 languages. In this sample no two languages from the same geographic or cultural area were included. Languages per cultural group were selected randomly with a table of random numbers using Kenny's (1974) overview of geographic and cultural areas. An overview of the languages used can be found in Bybee (1985: 215-216).

Harley & Ritter (2002) base their study on the *University of Calgary pronoun database* which houses general language information, information on personal and demonstrative pronoun paradigms, and summaries of the pronoun systems of 109 typologically diverse languages. More specifics on the languages

chosen and on the form of the database can be found in Harley & Ritter (2002: 519-522) and in Bliss & Ritter (2006).

Trommer (2005) selected languages from genetically diverse language families according to Ruhlen's (1987) classification with the entry criteria that each language exhibit at least one of the following three properties: (i) direction marking; (ii) tense and agreement marking both expressed by prefixes or (iii) languages that express subject person and subject number by different affixes (Trommer 2005: 292-294). The part of Trommer's sample which is especially relevant to this study is an overview of languages which encode subject person agreement with a different affix than subject number agreement. 58 languages of this type were included in his study. An overview of the full sample can be found in Trommer (2005: 509-512).

Now that we have looked at the typology of these studies used, let us turn to some universal tendencies in verbal inflection. The first type of universal tendency in (verbal) inflection can be grouped under what Bobaljik (2008) refers to as morpheme inventory universals. Morpheme inventory universals are implicational. There is, for example, an implicational relationship between values of inflectional categories. The relationship is formalized in (2).

- (2) Morpheme inventory universal concerning feature values
 value X_4 > value X_3 > value X_2 > value X_1

An example is helpful in understanding the hierarchy in (2). A possible candidate for category X is the category: number. We can associate X_4 with the value trial, X_3 with the value dual, X_2 with the value plural and X_1 with the value singular. The presence of a trial implies the presence of a dual. The presence of a dual implies the presence of a plural form. The presence of a plural form implies the presence of a singular form (Aikhenvald & Dixon 1998: 59, Baerman, Brown & Corbett 2005: 92-95, Cysouw 2003: 309, Harley & Ritter 2002: 497). The loss of the dependent values trial and dual in Anejom that we saw in (1) and the loss of the category dual in Icelandic (also described in the introduction to this section) both correspond with this implicational hierarchy in number values.

Apart from an implicational relationship between values of one feature there is also an implicational relationship between combinations of feature sets. For example, if gender is encoded in the plural this implies that gender is also encoded in the singular. Aikhenvald & Dixon (1998: 61) formulate this observation as follows: "if the choices in system Y depend on those made in system X, we will always expect more choices in Y to be associated with the unmarked than with the marked form of X."

Following Bobaljik (2008), we can formalize morpheme inventory universals concerning combinations of features as in (3).

- (3) Morpheme inventory universals combining feature sets
 $(X_4+Y) > (X_3+Y) > (X_2+Y) > (X_1+Y)$

A possible candidate for category X is number and a possible candidate for category Y is gender. For example, if gender (Y) is encoded in the plural (X_2) this implies that gender (Y) is also encoded in the singular (X_1) (Baerman, Brown & Corbett 2005: 82-90, Harley & Ritter 2002: 514-518). The reverse is not necessarily true. If gender is encoded in the singular it does not necessarily follow that gender is also encoded in the plural. It is precisely the more dependent feature value plural that often forms the context for neutralization (Aikhenvald and Dixon 1998: 66, Baerman et al. 2005: 59, 220). The non-expression of a category such as gender in the context of a marked value such as the plural is referred to by Nevins (2007: 4) as *markedness-triggered neutralization*. *Markedness-triggered neutralization* means that contrasts like gender that are encoded in unmarked contexts such as the singular are neutralized in more marked values of a feature like the plural.

To further illustrate the relation between markedness of a feature value and the likelihood of neutralization, let us compare the paradigm in (4) with the paradigm in (5). The value [past] is more marked than the value [present] (Greenberg 1966). In languages where tense is not encoded inflectionally, finite verbs receive the present tense as a default interpretation (De Hoop, Haverkort & Van den Noort 2004). The observation that present tense yields a default interpretation is additional support for the assumption that the present tense is an unmarked form. Following *markedness triggered neutralization*, we expect that the likelihood of neutralization is greater for the past tense than for the present tense. In the paradigm in (4), the marked value [past] forms the context of neutralization and is thus expected. The pattern in (5), however is not expected because the unmarked feature [present] forms the context for neutralization. Homophonous forms are indicated by a box.

- (4) Expected: past tense neutralizes person

	Present	Past
1	A	D
2	B	D
3	C	D

(5) Not expected: present tense neutralizes person

	Present	Past
1	A	D
2	A	E
3	A	F

We have seen that neutralization occurs more frequently in marked contexts than in unmarked contexts. The next concern is the direction of neutralizations. The paradigm in (6) (where person neutralizes tense) is less likely to occur than the pattern in (4) (where tense neutralizes person).

(6) Not expected: person neutralizes tense

	Present	Past
1	A	
2	B	E
3	C	F

Pinker (1996: 204) suggests that there is a relation between the proximity of an affix to the stem and the direction of neutralization. Therefore, let us consider what Bobaljik (2008) refers to as affix-order universals. If one compares affix ordering across languages, there is no universal linear ordering for affixes. Some affixes are, however, cross-linguistically expressed more closely to the stem than other affixes. For example, cross-linguistically, aspect is expressed closer to the stem than tense (Blansitt 1975, Julien 2000). This means that we can expect to find two word orders (assuming the languages code tense and aspect): [tense-aspect-stem] or [stem-aspect-tense]. Languages that encode tense closer to the stem [aspect-tense-stem] and [stem-tense aspect] are not attested.

The generalization concerning the expression of aspect and tense exhibits a more general pattern, namely, that it is not possible to make linear generalizations, but that we can make typological generalizations concerning proximity to the stem. The ordering of affixes in relation to the verb stem plays a role in Bybee (1985), Cinque (1999), Julien (2002) and Rice (2000). A common feature in these studies is

the hierarchical ordering of grammatical features. A typical affix-order universal is formulated in (7).

- (7) *Affix order*
 If a category Y occurs in the same word as category X, then X is closer to the stem than Y.

Two affix orders are allowed by (7); [Y-X-STEM] and its mirror image [STEM-X-Y] since, in both these sequences, X is closest to the stem. The sequences [X-Y-STEM] and its mirror image [STEM-Y-X] are not permitted: Y is closer to the stem than X. Pinker (1996: 204-205) suggests that affix order and the direction of neutralization are related. Pinker suggests that features that are expressed close to the stem are higher on the hierarchy of functional elements than features that are expressed farther from the stem. Features that are high up the hierarchy of functional elements are likely to neutralize features that are lower in the hierarchy. Take a feature like tense. Bybee (1985: 35) shows that in her sample tense is expressed closer to the stem of a verb than person marking. Since tense is expressed more closely to the stem than person it is higher up the hierarchy of functional elements than person. Since tense is higher up the hierarchy of functional elements we predict that tense neutralizes person and not vice versa. The predicted direction of neutralization is summarized in (8). 'X' stands for a feature high up the hierarchy that is expressed relatively close to the stem like tense. 'Y' stands for a feature like person that is expressed more distantly from the stem and is thus lower in the hierarchy of functional elements.

- (8) *Direction of neutralization*
 Category X (expressed closer to the stem) can neutralize category Y (expressed farther from the stem). Category Y does not neutralize category X.

Since tense is expressed closer to the stem than person, and thus higher in the hierarchy of functional elements, we predict that tense neutralizes person. Aikhenvald & Dixon (1998: 72) show that this is indeed the case. Tense features can neutralize person features such as in (4), but the reverse pattern (where person features neutralize tense features such as in (6)) is never attested in their sample of 500 languages. Baerman, Brown & Corbett (2005: 120) describe four counter examples in their sample of 200 languages of the Tibeto-Burman language Limbu where non-past and past are syncretic in second person singular subjects and in third

person objects in both the singular and the plural. The three other examples where person neutralizes tense all come from Oceanic languages (Baerman, Brown & Corbett 2005: 96-97). The observation remains however, that neutralization of person features in the context of tense as shown in (4) is much more likely to be attested cross-linguistically than the reverse situation as presented in (6). The common pattern that tense neutralizes person is predicted by (8).

The paradigm in (4) is in line with both the direction of neutralization as described in (8) as well as with (3), where we describe morpheme inventories for feature sets. Following (8), we expect neutralization of person in the context of tense and following (3), we expect that neutralization occurs in the context of marked feature values such as the past. The paradigm in (5) also neutralizes person in the context of tense which is the predicted direction of neutralization as formulated in (8) but it goes against (3), since the unmarked tense feature value [present] neutralizes person rather than a marked feature value. We expect neutralization to occur, only in the context of marked feature values.

Thus far, we have looked at clear-cut general tendencies in the patterning of neutralizations. We have looked at morpheme inventory universals concerning feature values such as the implicational relationship $\text{trial} > \text{dual} > \text{plural} > \text{singular}$. The presence of marked feature values such as dual implies the presence of less marked feature values like the general plural and the singular. This implicational relation also tells us something about the type of feature value that triggers neutralization. More dependent feature values such as the dual are likely to form a neutralizing context for other features such as gender than unmarked features values like the singular.

The direction of neutralization corresponds to affix order. The feature that is expressed closer to the stem is likely to neutralize features that are expressed farther from the stem. For example, tense is expressed closer to the stem than person. The observation that tense is expressed closer to the stem than person implies that tense is higher than person in the hierarchy of functional elements. Features that are high in the hierarchy may neutralize features that are lower in the hierarchy. These clear-cut examples are important because they offer insight regarding the basic principles of feature structure. We will now zoom in on two grammatical categories that play a central role in this study, namely, person and number.

Let us first consider the universal inventory of morphemes concerning person and number. We already looked at the morpheme inventory for number: $\text{trial} > \text{dual} > \text{plural} > \text{singular}$. Inventory universals for the category person are less clear-cut. In general, if a language encodes second person then it also encodes first

and third person. The syncretism of first and third person is rare. The syncretism between first and second person and between second and third person are both common (Baerman, Brown & Corbett 2005: 59, Cysouw 2003: 124-134, 2005: 242-243).

Researchers have proposed the following two hierarchies for person marking: (1) $3 > 1 > 2$ (Aikhenvald & Dixon 1998, Harley & Ritter 2002); and (2) $1 > 2 > 3$. Let us begin by looking into the arguments for hierarchy (1). The hierarchy $3 > 1 > 2$ is based on assumptions on markedness. Third person is commonly assumed to be an unmarked form (Aikhenvald & Dixon 1998, Baerman, Brown & Corbett 2005, Benveniste & Meek 1971, Forchheimer 1953, Harley & Ritter 2002). Authors offer the following three pieces of evidence supporting this claim. First, third person is often encoded with a zero morpheme, which is a formal indicator of unmarkedness. Second, third person is more likely to encode subdivisions such as gender, location and class. Openness to the encoding of subdivisions is associated with unmarkedness. Lastly, third person can be used in a very wide variety of contexts. In English, for example, the third person pronoun can be used in impersonal constructions such as *it is raining*, where *it* is used as a non-referential subject placeholder. Additionally, third person forms can replace first and second person forms. In Dutch, children can say *Pauline fietsen* ('Pauline ride bike') meaning *Ik wil fietsen* ('I want to ride a bike') or *papa lezen* ('daddy read') meaning *Jij moet lezen* ('You have to read'). In contrast, third person is rarely replaced by first or second person (cf. Aikhenvald & Dixon 1998: 61, Forchheimer 1953: 5-6, Harley & Ritter 2002: 487).

First person is usually considered less marked than second person (Aikhenvald & Dixon 1998: 62, Bennis & MacLean 2006: 304, Harley & Ritter 2002: 499-500). The main argument in favour of this claim is based on acquisition order. First person is always acquired before second person. (Clahsen 1986: 95, Harley & Ritter 2002: 499-500, Katičić 2003: 260, Schlichting 1996: 124-125). The dependency of second person on first person is also observed cross-linguistically. If a language encodes second person with a unique affix it almost always also encodes first person with a unique affix. The reverse is not true. That is, a unique suffix for first person does not imply a unique suffix for second person (Baerman, Brown & Corbett 2005: 59, Cysouw 2003: 129-134, 2005: 243).

Let us now move to the second hierarchy regarding person features, namely $1 > 2 > 3$. Researchers have related this hierarchy to both animacy (Corbett 2000: 56-57, Silverstein 1976, Smith-Stark 1974: 657) and definiteness (Van Gelderen 2007: 36). Third person is associated with low definiteness and animacy whereas first person is associated with high animacy and high definiteness. Second person

lies in between first and third person with regards to animacy and definiteness. Second person is more animate and definite than third person and less animate and definite than first person. Researchers have used pronoun doubling in English to support the claim that second person lies in between first and third person with regards to definiteness. Van Gelderen (2007) shows that, in many languages, the likelihood of using an emphatic pronoun in combination with a regular pronoun correlates with definiteness. High definiteness increases the likelihood of adding an emphatic pronoun to the use of a regular pronoun. Van Gelderen (2007) takes examples of the use of emphatic pronouns in English from the British National Corpus (British-National-Corpus 2005). Examples (9) through (11) are taken from Van Gelderen (2007) and references to the British National Corpus (BNC) are given in brackets.

BNC shows that, in English, emphatic pronouns usually occur with the first person (9), whereas they do not occur with the third person (Example 11). The use of emphatic pronouns in combination with second person such as in (10) is attested but less frequently than with first person.

- (9) **Me**, I've been a night person longer than I can remember (BNC-GVL 335).
 (10) **You**, you didn't know she was er here (BNC-KC3 3064)
 (11) % **Him**, he (not attested in the BNC)

First person is thus associated more with definiteness than second person and with more definiteness than third person. In the animacy hierarchy presented above, second person lies between first and third person.

Another example that shows that second person lies in between first and third person is the relationship between number and person. Number marking is most likely to be attested in arguments that are high up the animacy hierarchy (Corbett 2000: 56-57, Silverstein 1976, Smith-Stark 1974: 657). First person encodes number more frequently than second which encodes number more frequently than third person.

The animacy hierarchy is formulated by Corbett (2000: 56) as in (12) where second person is considered less animate than first person and more animate than third person.

- (12) *Animacy hierarchy*
 1 > 2 > 3 > kin > human > animate > inanimate

The animacy hierarchy underlies what Cysouw (2003: 300) refers to as the horizontal homophony hierarchy. Since the likelihood of number marking depends on animacy, the most animate subject, first person, is most likely to encode number and the least animate subject, third person, is the least likely to encode number. The horizontal homophony hierarchy is visualized in (13).

(13) Horizontal homophony hierarchy (taken from Cysouw 2003: 300)

	Sing	Plur	<	Sing.	Plur.	<	Sing.	Plur.	<	-
1										
2										
3										

In (13), there are four possibilities in the marking of plural. The condition furthest to the right represents cases where person is not encoded at all. If person is encoded somewhere, it is encoded in first person. Second person follows first person and third person follows second person.

In short, we have looked at two different person hierarchies. If we look at person from the perspective of markedness we find that third person is the least marked person feature and that second person is most marked. The person hierarchy that follows from markedness is $3 > 1 > 2$ where third person is least marked and where second person is most marked. If we look at person from the perspective of animacy or definiteness we find that second person is in between first and third person. First person is most prone to number marking and to pronoun doubling, while number occurs least frequently on third person marking. With regard to number marking and with regard to pronoun doubling the behaviour of second person lies in between the behaviour of first and third person. We observe less number marking and less pronoun doubling than in first person but more than in third person. The person hierarchy that is based on definiteness or animacy is $1 > 2 > 3$.

Now that we have considered the morpheme inventories of the values of the categories person and number, let us consider the direction of neutralization between these two categories. Pinker (1996: 203) suggests that affix order is related to the direction of neutralizations. For many inflectional categories, there seems to be a fixed order relative to the stem. This relation, however, does not hold for the categories, person, and number.

With regards to the features person and number it is difficult to generalize over affix order. In most languages that express person and number, person and

number are expressed by a portmanteau suffix (Bybee 1985: 35, Trommer 2005: 294). In the building of his typological sample, Trommer (2005) only included languages which encoded person and number separately. In total, he describes 55 languages that adhere to this inclusion criterion. The relative distance of number and person features to the stem is variable. In some languages, person appears closer to the stem; in others, number is encoded closer to the stem. Trommer (2005: 301) finds that 87.5% of the languages in his sample encode person to the left and number to the right of the stem. This observation holds if person and number are both expressed by prefixes, if both are expressed by suffixes and it also holds when part of the grammatical information is expressed by a prefix and part by a suffix.

At first sight, studies on the direction of neutralization of person and number might seem messy. As we saw in (13) Cysouw reports a horizontal homophony hierarchy. This hierarchy states that if plurality is expressed on third person, it is also expressed on second person. If it is expressed on second person, then it is also expressed on first person.

The horizontal homophony hierarchy seems to underlie the claim of Noyer (1992) who argued that the category number is dependent on the category person. Kusters (2003: 32) describes deflection in four genetically different language families and claims that the category person depends on number. Kusters (2003) describes how person is often neutralized in the context of marked plural. We also observed the neutralization of person marking in the context of the marked plural in Anejom (1), corroborating the hypothesis by Kusters (2003) that person depends on number. For now, it is sufficient to understand the interdependent relationship between person and number. In 2.2, we will look more closely into the reasoning behind this relation.

2.2 *Feature structure and learnability*

Languages vary greatly with respect to how grammatical information is encoded. First, languages vary in the number of grammatical categories that are expressed inflectionally. Second, they differ in the number of feature specifications, and third, languages vary in the extent to which neutralization occurs. I follow Pinker (1996: 166-208) in the assumption that paradigmatic distinctions are acquired on the basis of formal differences between variants of the same word. Learners begin with a system without inflectional distinctions. Children will only depart from this position if they encounter contrasts in the input. For example, if there is no evidence for the inflectional category, tense, in the input, learners will not assume this category. Learners will assume the smallest number of distinctions necessary to account for

the input. A small number of formal distinctions thus corresponds to a small inventory of morphological features. I interpret feature structure as a set of guiding principles through which we can account for inflectional contrasts in the input. Feature structure is also economical in the sense that it minimizes the amount of effort exerted by language learners.

In section 2.1, we focused on affix inventory universals and the direction of neutralization patterns. The goal of this subsection is to relate these generalizations about the reduction of inflectional distinctions to a parsimonious learning strategy. Let us begin by looking at implicational relationships in feature values. We observed that the presence of the dual implies the presence of the plural. Harley & Ritter (2002) argue that implicational relations in feature values result from cognitive dependency between the features being expressed. The general notion plural, for example, needs to be triggered first before the more specific notion dual can be triggered. If confronted by a number contrast in the input, learners will always associate this contrast first, with the distinction singular instead of plural. More dependent values such as the dual are only assumed after more independent values i.e. plural have been acquired.

We saw in Icelandic that politeness strategies yielded a loss of the category plural. The contrast between the singular and dual, however, was retained in the input. The new generation of language users reinterpreted the distinction between singular and dual forms as a distinction between singular and plural forms. No dual can be assumed before the general plural is acquired. If learners are confronted with formal contrast in the input related to number, they will assume the most unmarked number contrast, namely the contrast between the singular and the plural. The reinterpretation of the dual form as a plural form follows from the cognitive dependency between duals and plurals.

Let us now move from the hierarchy in number values to a hierarchy in person values. Value specification of person is more flexible than value marking for number. We saw that second person is the most marked category. We also saw that second person can group with either first or third person. Both combinations are equally common. Only the grouping of first and third person is rare. Bennis & MacLean (2006), Greenberg (1993) and Kerstens (1993), assume that person distinctions are related to two primitives, namely [speaker] and [participant]. Speaker is also referred to as [+ego], participants are also referred to as [+utterance] and [+conversational pair]. [Speaker] refers to first person only and [participant] refers to both speech act participants, namely first and second person.

First and third person are maximally distinctive. First person is characterized as [+speaker]. The feature [+participant] follows from [+speaker].

Third person is characterized as [-participant] and from the feature [-participant], follows the feature [-speaker]. First and third person can thus be characterized by one feature whereas second person requires two feature specifications that do not imply each other, namely [-speaker,] and [+participant] (Bennis & MacLean 2006: 304).

If we combine the claim that inflection is acquired in a piecemeal fashion based on contrasts in the input with the assumption that [speaker] and [participant] are primitives, we can also make predictions about the path by which learners acquire person marking. Since learners begin with the assumption that inflection is absent, no person features are initially assumed. All three person distinctions are associated with the same affix, for example *-a* in (14). If the learner is confronted with evidence for person marking in the input, then two options are available. The learner can select the primitive [participant] and contrast third person with non-third person. In this case, learners associate first and second person with [+participant] and third person with [-participant]. This path of acquisition is represented in stage IIa in (14).

The learner can also select the feature [speaker] and contrast first person with non-first person. In this case, the learner associates first person with [+speaker] and second and third person with [-speaker]. This path is represented in stage IIb in (14). If neither of these paths based on the specification of one primitive can explain all form variation in the input, then a combination of both primitives is assumed. If we allow combinations of both primitives, the new combination is derived [-speaker, +participant] which is related to second person. The acquisition of a separate set of specifications for second person results in the paradigm of stage III where first, second and third person are all encoded by different affixes.

(14) Stages in the acquisition of person marking

	Stage I	Stage II a	Stage IIb	Stage III
1	-a	-b	-b	-b
2			-a	-c
3		-a		-a

In 2.1, we saw that the syncretism of first and third person is rare, cross-linguistically, whereas the syncretism between first and second person and second and third person are equally common (Baerman, Brown & Corbett 2005: 59, Cysouw 2003: 124-134, 2005: 242-243). The paradigms in stage II correspond with the typologically most frequent forms of neutralization in person marking. Stage IIa

corresponds with the syncretism between first and second person and stage IIb corresponds with the syncretism between second and third person. Since first and third person have different specifications, both with respect to the feature [speaker] as well as with the feature [participant], it would be expected that syncretism between first and third person is rare.

In 2.1, we observed that second person is the most marked person feature. I follow Bennis and MacLean (2006: 304) in the assumption that the marked status of second person can be understood as the result of the fact that second person marking requires the specification of both the feature [speaker] and of the feature [participant]. A one-feature contrast (that is, the contrast between only the feature [speaker] or [participant]) is simpler and less marked than a two feature specification.

In 2.1, we also observed that second person is in between first and third person with regard to the effects of animacy or definiteness. The assumption that second person shares a specification with third person, namely [-speaker] and a specification with first person, namely [+participant] can explain why second person is in between first and third person in the animacy hierarchy and in the definiteness hierarchy. Sometimes, second person behaves like first person because of the specification [+participant] and sometimes second person behaves like third person because of the feature [-speaker].

Now that we have looked at the piecemeal building of feature value specifications, let us move on to neutralization patterns. Neutralization means that inflectional distinctions that are encoded in some contexts of a language are absent in other contexts in that same language. For example, it is possible that a language encodes person distinctions in the present tense, but not in the past tense (See (4)). We saw that the most common pattern of neutralization is triggered by marked feature values. For example, past tense is a more marked value than the present tense and we are more likely to find neutralization in the past tense (as shown in (4)) than in the present tense (as shown in (5)). We also observe a preferred direction of neutralization. Features that are encoded by affixes that are expressed closer to the stem usually neutralize features that are encoded by affixes expressed further from the stem. Since tense is expressed closer to the stem than person, it is not surprising that the preferred neutralization pattern is where tense neutralizes person (as shown in (4)). The pattern where person neutralizes tense as hypothesized in (6) is rarely attested.

The question is why we find patterning in neutralization patterns. Pinker (1996: 203-206) relates neutralization patterns to limited paradigm splitting. Limited paradigm splitting means that if learners build an inflectional paradigm, they will

build it in the most parsimonious way allowed by the input. Say that a language learner is confronted with evidence for the values first, second and third person in the category person and with the values present and past in the category tense. This creates six logical combinations of person and tense, as shown in (15) if the learner would immediately allow the maximum number of splits.

(15) Maximal splitting

	Present	Past
1		
2		
3		

Now, instead of allowing all possible paradigm splits, the learner only allows limited paradigm splitting. Limited paradigm splitting is guided by two factors: a hierarchy of functional elements and a markedness hierarchy. The ordering of affixes and direction of neutralization are predictable based on the hierarchy of functional elements. Instead of expressing both person and tense features, the learner will only express the category which is highest in the hierarchy of functional elements. Categories that are expressed close to the verb stem are higher up in the hierarchy of functional elements (see (7) and (8)). Since tense is expressed closer to the stem, a learner will express tense rather than person. If learners are confronted with evidence for the category person, the markedness hierarchy says that the learner will split the paradigm for person marking, only in the most unmarked value of the category tense, or in this case, the present tense. Thus, person is first expressed in the unmarked context present. Only if the input provides evidence for the feature [person] in the marked context past, will the paradigm split in order to encode person marking in the past tense.

In 2.1, we saw that it is difficult to speak about the categories person and number in terms of a hierarchy of functional elements. In inflection, person and number marking is usually fused. If person and number are marked separately, there is no fixed distance of the affixes that encode person and number to the stem of the verb. We find neutralization of person in the context of number and neutralization of number in the context of person.

In the case of deflection in Anejom (described in 2.1) and in the cases of deflection described in Kusters (2003), we saw that person depends on number. Person features are neutralized in the context of the marked plural and not neutralized in the unmarked singular. Neutralization of person in the context of

number fits the more general picture of limited paradigm splitting where some features are neutralized in the context of a marked value of another feature.

Whereas neutralization of person in the context of number fits the general picture of markedness-triggered neutralization, the neutralization of number in the context of person deviates from this more general tendency. If number neutralization in the context of person had been guided by markedness, we would expect to find the most number neutralization in context of the marked second person. Instead, we observe that number neutralization occurs most in the context of the unmarked third person. It is likely that the horizontal homophony hierarchy follows from the rise of the grammatical category: number. Number systems develop at the top of the animacy hierarchy. Number marking is first expressed in high animacy subjects such as first person and eventually spreads down to less animate subjects (Corbett 2000: 266).

The dependency of person on number in deflection is also related to limited paradigm splitting. Let us consider the options of limited paradigm splitting for a language learner who has evidence for (1) three person distinctions in the singular and (2) number marking throughout the entire paradigm. Bybee (1985) shows that third person plural forms are the most frequently attested plural forms in Spanish. Since third person inflection combines not only with pronouns, but also with nouns and in impersonal constructions, it is likely that Bybee's observation can be generalized to other languages. Baerman, Brown & Corbett (2005) show that, if person marking is lost, third person plural marking is usually generalized to first and second person plural, as was the case in Anejom. The overgeneralization of third person plural to non-third person plural forms is also observed in language acquisition (cf. Leonard, Caselli & Devescovi 2002).

Since third person is a very general, and therefore, frequent form, it is likely that a learner who acquires the plural is first confronted with evidence for the plural feature in third person. As we can see in (16), three person distinctions and two number distinctions yield a maximum of six distinct cells. Limited paradigm splitting implies that not all separate cells are actually assumed. There are two possible paths of paradigm splitting. One possibility is that number is encoded only in third person, as shown in (17). This option goes against the animacy hierarchy since third person plural marking implies plural marking on first and second person. A second possibility is that third person plural marking is interpreted as a general plural marking as shown in (18). This second option is in line with the animacy hierarchy which states that if number is encoded on third person, it is also encoded on first and second person.

(16) Maximal splitting

	Singular	Plural
1	-b	-?
2	-c	-?
3	-a	-d

(17) Plural marking in context of third person only

	Singular	Plural
1	-b	
2	-c	
3	-a	-d

(18) Underspecification of person in the context of number

	Singular	Plural
1	-b	-d
2	-c	
3	-a	

The notion that person is dependent on number in deflection is thus related to limited paradigm splitting in combination with the animacy hierarchy. The presence of number marking in third person implies number marking for all persons. The paradigm thus splits in favour of a general plural marker like in (18).

In this section, we related observations concerning common cross-linguistic patterns of syncretism and inflection to the issue of learnability. Following Pinker (1996), we assumed that learners only acquire inflection on the basis of overt contrasts in the input. Learners only assume categories and values which are evidenced in the input. The implicational hierarchy of feature values filters the input. For example, if learners are confronted with two suffixes that are historically associated with a singular and a dual form, they will reinterpret the highly marked value [dual] as the less marked plural since the value dual depends on the value plural.

Neutralization of distinctions was related to paradigm splitting. Paradigm splitting means that not every feature value combination needs to be separately

encoded. Rather, features lower in the hierarchy of functional elements are neutralized in the context of marked values.

With regard to the features that are directly relevant to the Dutch paradigm, (person and number), we saw the following: In cross-linguistic comparison, we observe both directions of neutralization between person and number. Both patterns are possible, but they arise in different circumstances. Dependency of number on person is linked to the rise of agreement. Number systems develop at the top of the animacy hierarchy, that is, number marking is first attested with high animacy subjects such as first person and then spreads down to less animate subjects (Corbett 2000: 266). In contrast, dependency of person on number is related to deflection. In languages like Dutch (where number is encoded on all persons including third person plural) we expect person to depend on number, since third person is considered a default, frequent form. The fact that third person is frequent and has a wide distribution implies that it is acquired early. The presence of plural marking on third person implies the presence of plural on non-third persons, since plural marking solely on third person goes against the animacy hierarchy. If person features are neutralized, there are three possible paths of deflection: Person marking can be lost all together; it can be lost with first and second person or; it can be lost with second and third person.

2.3 The likelihood of feature structure driven deflection

In 2.2, we hypothesized that children acquire inflectional contrast in a specified order. Deflection driven by feature structure implies a reduction of the number of acquisition steps taken. We expect loss first of contrasts that are acquired late. The question is: Under what circumstances do we observe a reduction in the number of contrasts? In this subsection we will consider factors that can trigger Morphology-internally driven deflection.

A central claim in Pinker's theory on the acquisition of inflection is that inflectional contrasts are only assumed on the basis of overt evidence. A reduction of overt evidence for inflectional contrasts can slow down the acquisition process up to the point that an inflectional contrast is no longer acquired. Evidence for inflectional contrasts can be reduced due to language internal and language external processes.

An example of a language external process is language or dialect contact. On average, adult language learners are less successful in mastering inflection than young learners (Blom, Polišenská & Weerman 2007). When two languages are in contact with one another, there is a tendency for adults to learn the new language.

This results in an increase in the number of adult learners. If adult learners do not acquire the target system, their language will differ from the previous system. This variation will lead to differences in the input for the next generation. A less consistent output implies less overt evidence for inflectional contrasts and increases the likelihood of deflection. The observation that adult learners are less successful in mastering inflection predicts a correlation between the number of adult learners in a language community and deflection. Indeed, we find that the degree of language contact correlates with the degree of deflection. More language or dialect contact implies more deflection (Kusters 2003, Trudgill 1986, Weerman 2006).

Not every language, however, is equally prone to deflection. Some inflectional paradigms pose more difficulties for language learners than others. Polišenská (2008) shows that some inflections are more vulnerable to omission and prone to late emergence than others. Examples of characteristics of inflection that are prone to late emergence are affixes that encode multiple features, unstressed affixes, non-syllabic affixes, and infixes. Empirical studies confirm that the order of acquisition of morphemes is contingent on factors such as phonological salience of the morphemes, and a clear-cut relation between the affix and the features it encodes (e.g. Bittner & Dressler 2003, Brown 1973, Laaha & Gillis 2007, Slobin 1985).

Deflection that is motivated by feature structure is not associated with overt prestige. It is a form of internally motivated language change, termed ‘change from below’ or change from within the system as opposed to ‘change from above’ (Labov 1966). The *Principle of Markedness Agreement* as formulated by Andersen (2001: 31) states that an innovated element appears first in marked contexts if the change is marked and first in unmarked contexts if the change is unmarked. Changes from within the language system are considered unmarked changes. Unmarked contexts are for example informal registers. Since deflection is not associated with overt prestige, but occurs below the level of consciousness, we thus expect deflection motivated by feature structure to appear first in informal registers.

In short, we have looked at the circumstances in which we expect feature structure driven deflection. We saw that language contact increases the likelihood of morphology-internally motivated deflection. Fusional systems with phonologically non-salient suffixes are most prone to deflection. We expect morphology-internally motivated deflection to occur first in informal registers.

3 Grammar internal sources of syncretism

In the last section, we related feature structure to the issue of learnability. Cross-linguistically, common patterns of syncretism follow from economical acquisition

strategies. Deflection that is driven by feature structure implies a reduction of the number of acquisition steps taken. We expect loss of contrasts that are acquired late. In special circumstances, generalizations that follow from feature structure can be overruled. In this section we will discuss one source of syncretism that can interfere with feature structure, namely phonology.

Although there are universal tendencies in the working of phonological rules, the effects of phonological rules on the inflectional paradigm can vary greatly per language because the relation between the abstract features of an inflectional marker and its phonological realization are arbitrary. For example, the effect of a *-t* deletion rule on an inflectional paradigm depends on the position of *-t* in the paradigm. Because phonology is not related to feature structure, the effects of phonology on the inflectional paradigm can differ per language. Phonologically motivated homophony between inflectional markers can, but does not have to, accord with feature structure.

The central question of this section is: How can we find independent evidence for the role of phonology in inflectional homophony? Various types of phonological rules such as assimilation, deletion, vowel reduction, and stress shift can affect the appearance of an inflectional paradigm. Our focus now, is not on the specific technical details of these phonological operations. We are particularly interested in determining how we can distinguish phonologically motivated homophony from morphologically motivated neutralization patterns. In order to capture this problem, let us imagine the effects of a *-t* deletion rule in the Dutch dialect of Eexterveen. The verbal inflectional paradigm of Eexterveen with *-t* is presented in (19) and the hypothetical variant without overt evidence for the suffix *-t* is presented in (20).

(19) Eexterveen dialect without *-t* deletion

	Singular	Plural
1	-Ø	-t
2	-st	-t
3	-t	-t

(20) Hypothetical: Eexterveen dialect with *-t*-deletion

	Singular	Plural
1	-Ø	-Ø
2	-s	-Ø
3	-Ø	-Ø

If the *-t*-deletion scenario would apply in Eexterveen, how would we know that the syncretism between the plural form and first and third person singular is motivated by phonology and not by morphology? In other words, how would we determine if the form overlap between all plural forms and first and third person singular in (20) is accidental? The answer to this question is relevant, because we hypothesized that the number of possible morphologically motivated systematic syncretisms is constrained by feature structure. If homophony between inflectional markers results from a source outside morphology, the restrictive system that underlies feature structure can be overruled. Phonologically motivated homophony between inflectional markers can thus obscure evidence for feature structure.

If we formulate a theory of feature structure that can account for all syncretic patterns in (20) this could lead to unfounded generalizations. In 2.1, we saw that, according to the animacy hierarchy, number marking on second person can not occur when person marking in first person is absent. A theory of feature structure that can account for the overlap in form between all plural and first and third person singular (20) fails to account for the fact that absence of number marking in first person is cross-linguistically rare. From the horizontal homophony hierarchy (as illustrated in (13)), it follows that if number marking is absent in first person it is usually also absent on second person. The presence of number marking on the less animate second person implies number marking on the more animate first person. Although the attested number neutralization in first person in (20) is rare, we cannot disqualify the syncretisms as following from feature structure solely on the basis of cross-linguistic frequency. We need independent empirical evidence for the role of a non-morphological source for the attested neutralization patterns before we can justify our decision to disqualify the syncretisms in (20) as following from feature structure.

If we merely had information on the paradigm in (20) and if (20) was the only general paradigm available in a language, it would be impossible to find evidence for the role of non-morphological sources for the observed neutralization patterns. Diachronic and closely related synchronic variants of the paradigm in (20) where *-t* deletion does not apply (as in (19)) or where *-t* deletion is optional (such as in (21)) can provide the needed independent empirical evidence.

(21) Hypothetical: Eexterveen with optional *-t*-deletion

	Singular	Plural
1	-∅	-t/-∅
2	-st/-s	-t/-∅
3	-t/- ∅	-t/-∅

We can assume that the paradigms in (19) and (20) are either neighbouring dialects or precursors to the paradigm in (20). If we compare the paradigm in (20) with the paradigm in (19) or (21), we see that the syncretic patterns in (19) and (20) partially overlap. In both paradigms, we find that all plural forms and third person singular are encoded with one suffix. In (19), all plural forms and third person singular are encoded with *-t*. In (20), third person singular and all plural forms are encoded with *-∅*. In (20), however, we see less variation in the inflectional paradigm. The first person singular form is also homophonous with the third person singular and with all plural forms since first person is also encoded with *-∅*. If we assume that the variants in (19) and (20) were once the same, there are two possible explanations for the overlap in form between first person singular and the third person singular and between the plural forms. Either the neutralization is morphologically motivated, or the loss is (also) motivated by phonologically motivated *-t* deletion.

One form of evidence for the role of *-t* deletion in the neutralization of the difference between first and third person singular and between first and third person singular and the plural forms in (20) is the observation that *-t* deletion is also attested in contexts where the loss of *-t* does not affect the inflectional paradigm. For example, we see that in (19), second person singular is encoded with the suffix *-st*, whereas second person singular is encoded with the suffix *-s* in (20). This absence of *-t* in (20) cannot be explained as a morphologically motivated change since the morphological system remains the same. Both the suffix *-s* as well as the suffix *-st*

are unique markers of second person singular. Since a *-t*-deletion rule is the only possible explanation for the variation between *-st* and *-s*, it suggests that a *-t* deletion rule played a role in the alternation $-\emptyset$ and *-t* as well.

We can also extend our view and look at the behaviour of *-t* in other grammatical categories. If we find, for example, that the diachronic or synchronic variant that includes the paradigm in (19) refers to the noun *rijst* ('rice') with a *-t* and that the language variant that includes (20) refers to rice as *rijs*, without a *-t*, we can see that there is a systematic difference between variants (19) and (20). The systematic difference between (19) and (20) is that, where (19) expresses *-t* in word final position, *-t* is absent in word final position in the variant that includes (20). In variant (20), *-t* is absent in contexts where *-t* is present in variant (19). Since the absence of *-t* in the noun *rijs* ('rice') and in the suffix *-s* does not yield a change on the morphological level, we have independent evidence for the role of phonology in the absence of *-t* in (20). Similarly, we also have evidence for the hypothesis that the syncretism between first person singular and third person singular and the plural forms is not (solely) motivated by morphology.

A second possible piece of independent evidence for the role of phonology in the loss of *-t* comes from dialects where we find paradigms such as (21). The dialect in (21) reflects the intermediate stage between variant (19) and variant (20). In (21), *-t* deletion is optional. If we see that in variant (21) *-t* deletion is phonologically conditioned, this phonological conditioning provides a second form of independent empirical evidence for the role of phonology in the loss of *-t*. Goeman (1999: 472-473) shows that, among other factors, the occurrence of *-t* deletion in many Dutch dialects depends on the sonority level of the preceding and/or following sound. Low sonority of the sound that precedes and/or follows *-t* leads to more *-t* deletion. The complete scale of the level of sonority goes from *loopt* ('walks') (plosive, low sonority) > *zocht* ('searched') (fricative) > *komt* ('comes') (nasal) > *vaart* ('sails') ('liquid) > *duwt* ('pushes') (glide) to *gaat* ('go') (vowel, high sonority). Because of the level of sonority, *-t* is most likely to be deleted in verbs like *loopt* ('walks') and least likely to be deleted in verbs like *gaat* ('goes'). The effects of sonority relate directly to articulatory complexity. This is expected for phonological conditioning but unconnected to morphologically motivated syncretisms.

3.1 Grammar external sources of syncretism

Both system-internal processes such as phonology, and system-external processes such as socio-pragmatic factors can affect the outlook of an inflectional pronominal paradigm. Bennis (2003-2004: 19-20) shows that in specific socio-pragmatic

circumstances, one can refer to first person by using a second person pronoun in modern Dutch. Bennis (2003-2004: 19) gives an example of a soccer player who is talking about his own achievements and who does not use the first person pronoun *ik* ‘I’ to describe his achievements but the second person pronoun *je* ‘you’.

- (22) Je kreeg de bal en toen zag je iemand vrij staan toen speelde je de bal direct.
 ‘You received the ball and then you saw that someone was free and then you passed the ball directly.’

The sentence in (22) is phrased in the past tense. In Dutch, past tense verbs do not encode person, so in the case of (22), the choice for the second person pronoun *je* instead of the first person pronoun *ik*, does not affect the form of the finite verb. If we rephrase (22) using the present tense, the choice of the inflectional marker is affected. In (23), we see *je krijgt* where the finite verb ends in -t. If the pronoun *ik* (‘I’) had been used it would have combined with the form *krijg* without a -t.

- (23) Je krijgt de bal en je ziet iemand vrij staan en je speelt de bal direct
 ‘You receive the ball and you see that someone is free and you pass the ball directly’

Although the substitution of *ik* by *je* affects the the choice for the inflectional marker, the replacement of first person by second person does not have to be described in terms of morphology. This neutralization is an on-line substitution of one person value with another that does not affect the language system.

However, pragmatically motivated forms can end up being grammaticized to the point where the substitutions are the only ones in the paradigm. Then, what was originally motivated by pragmatics has become part of grammar (cf. Evans, Brown & Corbett 2001: 209). In that case we have a pragmatically motivated syncretism that has become part of grammar. Since it is the loss of socio-pragmatic constraints on the substitution pattern that makes it part of morphology, evidence for the role of pragmatics in the creation of a syncretism relies per definition on the comparison of closely related variants of language, either dialectal or diachronic, where the older variant has not yet been substituted.

In the remainder of this section, I will zoom in on one pragmatic source of syncretism that affected the Dutch inflectional system, namely politeness. In 3.2, politeness is defined. In 3.3, possible effects of politeness on the inflectional

paradigm are discussed. Via the information in 4.1 and 4.2, we derive two types of empirical evidence for the role of politeness in deflection in 4.3.

3.2 *Defining politeness*

Politeness means putting things in such a way to consider face of the hearer. In Brown & Levinson's (1987) theory, there are of two kinds of face: positive face and negative face (cf. Brown & Levinson 1987: 62-64, Brown & Gilman 1989: 161). Positive face deals with the self-esteem of the addressee. In general, addressees want to be understood, appreciated, liked or admired. Criticisms, insults, disagreement and corrections threaten the self-esteem of the hearer and are therefore threats to positive face. Negative face deals with the desire of the addressee not to be impeded in his actions. Directives are speech acts that intend to induce action from the hearer. Commands, requests, and advice are all examples of directives. Generally, directives threaten the negative face of the hearer (Brown & Gilman 1989:173).

Politeness is concerned with softening potential threats to the addressee's face. Positive politeness softens face threats by letting the addressee know that he has desirable qualities in the eyes of the speaker and by stressing common ground between the speaker and the hearer. The direct criticism 'this section is chaotic' can be rephrased as 'You know how I admire your ability to associate different types of information, but in this section, that quality leads to chaos.' The inclusion of a complement reduces the loss of self-esteem of the hearer and thereby reduces the loss of positive face. Giving compliments is a positive politeness strategy because compliments fulfil the desire of the addressee to be liked and admired.

Negative politeness is meant to satisfy the negative face of an addressee. Negative face is concerned with the desire to be free in choosing one's own actions. Satisfying the negative face of an addressee can be done by using apologies for transgressing, by using indirect language, and by being respectful. Respect can be shown by non-linguistic forms of deference such as bowing and by linguistic forms of deference such as using polite address forms such as *Your Honour* (Brown & Levinson 1987: 70). Indirectness is especially relevant in reference to speech act participants. The following command: 'I want you to rewrite this section' is face threatening because it is clear that the speaker requires action from the addressee. The command can be reformulated in a more polite way as follows: "Would it be possible to rewrite this section?" The question form, the modal verb and the loss of direct reference to the speaker and hearer all cushion the fact that the speaker requires action from the addressee (cf. Brown & Levinson 1987-194), and the revised utterance suggests that the speaker has the choice to rewrite.

So far, we have seen that there are two forms of politeness: Positive politeness concerns the positive face of the hearer by letting him know that he has positive qualities in the eyes of the speaker. Compliments are a form of positive politeness. Negative politeness is concerned with negative face of the hearer. Indirect formulations are a form of negative politeness. The question now is: What effects can politeness have on the inflectional paradigm? This is the topic of section 3.3.

3.3 *Effects of politeness in the inflectional paradigm*

Since negative politeness is concerned with the reduction of linguistic explicitness, it is not surprising that negative politeness is the most productive source of politeness-induced neutralization in the inflectional paradigm. There are two politeness strategies that reduce direct reference to the speaker and/or hearer which can affect the pronominal and the verbal paradigm: (i) the neutralization of number marking and (ii) the neutralization of person marking (cf. Heath 1998: 85). In this section, we will look at the possible effects of politeness on the verbal paradigm.

The first politeness strategy that can result in syncretism in the inflectional paradigm is the neutralization of number features in speech act participants. Here, I concentrate on the neutralization of number features in second person, although neutralization of number features is also possible in first person, for example, in the use of royal “we” (Brown & Gilman 1989). Head (1978: 157) shows that in more than 80 languages a plural form is used to address a single addressee.

French is a well-known example of a language that uses the second person plural pronoun (and second person plural inflection) as a form of reference to one addressee. The second person plural pronoun *vous* can refer both to multiple addressees in all linguistic registers as well as to one addressee in referential registers. The use of a plural pronoun towards one addressee makes a statement less direct: plural forms do not literally single out the hearer, thereby saving the hearers negative face (Brown & Levinson 1987: 198-204, Listen 1999: 47-49).

Indirectness is not the only motivation for the use of second person plural forms towards one addressee. Greatness in number is related to physical greatness and physical greatness is a metaphor for power. The power metaphor is a linguistic expression of respect (Brown & Gilman 1960: 157, Listen 1999: 41-47). Listen (1999) shows how the metaphorical relation between power, greatness and plural number carries over in other linguistic domains. For example, Listen describes a

writer who refers to himself as *meine wenige Person* ('my few/small person') and powerful addressees are referred to as *grosser patron* ('great patron').

The second politeness strategy that can result in syncretisms in the inflectional paradigm is the neutralization of person features. First and/or second person can be referred to by using a third person reference. For example, instead of using a second person pronoun one can use titles such as 'my lord' as a form of address.

The use of abstractions such as *Your Highness* and *Your Majesty* or the use of titles such as *doctor* and *lord* towards an addressee can result in the systematic substitution of second person markers by third person markers. The expression: *would you like a drink* can be rephrased as *would the doctor like a drink?* or *would Your Highness like a drink?* Abstractions and titles are explicit forms of reference to an addressee's positive face. At the same time, they are less direct than second person singular forms because the addressee is not referred to directly. The indirectness of titles and abstractions results in saving negative face.

The use of abstractions and titles as address forms can yield the use of third person pronouns and inflection towards addressees in two ways. First of all, abstractions can grammaticize into new pronouns. The Spanish abstraction *Vuestra Merced* ('Your Honour'), for example, grammaticized into the honorific second person pronoun *usted*. The third person origin of *usted* is reflected in verbal inflection: it combines with third person singular inflection (Penny 1991).

Another way that the use of abstractions can facilitate the use of third person pronouns as address forms is through anaphoric reference. In many languages, the use of titles such as *Monsieur* ('My Lord') and abstractions like *Your Highness*, are anaphorically referred to through third person pronouns (Siewierska 2004: 222). The example in (24), taken from Siewierska (2004), shows the use of the third person pronoun *il* ('he') as a form of address, which was triggered by the address form *Monsieur* ('My Lord'). In (25), the third person feminine pronoun *elle* ('she') is used as a form of address towards a man. The feminine gender of the pronoun agrees with the feminine gender of the abstraction *Votre Altesse* ('Your Highness').

(24) Et Monsieur, qu'est ce qu'il désire?
 And sir, what he desires?
 'And sir, what do you desire?'

(25) Votre Altesse, que désire-t-elle?
 Your Highness, what desires she?

‘And Your Highness, what do you desire?’

Anaphoric uses of third person pronouns, such as those in (24) and (25), can be extended to deictic use. This means that we no longer need to refer to *Monsieur* (‘My Lord’) to use the form *il* ‘he’ as a polite form of address.

In short, politeness strategies affect verbal inflection in two ways: First, politeness can trigger the use of plural forms when making reference to a singular addressee, and second, politeness can trigger the use of third person forms. I follow Brown & Gilman ((Brown & Gilman 1960) in using V as a general marker for polite address forms as V- derived from Latin *vos-* and by using T – derived from latin *tu* – as a general marking for informal address terms. In 3.4, we will look at external evidence for the role of politeness in the use of plural forms or third person forms.

3.4 Evidence for politeness induced syncretisms

If a singular addressee is referred to with a third person form or a plural form in specific socio-pragmatic circumstances, this does not always imply a fundamental change in the verbal paradigm. The socio-pragmatics substitution only becomes a part of grammar when the substitution replaces the original second person singular form altogether. Since it is the loss of socio-pragmatic conditioning on the substitution pattern that makes it part of morphology, studying one synchronic variant of a language cannot provide evidence for the role of socio-pragmatic factors in the creation of a syncretism. Evidence relies per definition on the comparison of other closely related variants of language, either dialectal or diachronic, where the older variant has not yet been substituted.

In the comparison of closely related variants, there are two crucial aspects to consider: agreement and socio-pragmatic conditioning. Let us begin by looking at agreement as empirical evidence for the role of politeness in the creation of a syncretism.

If we look at the Greek example in (26) (from Comrie (1975: 410)), we see that a first person plural verb *eímetha* (‘we are’) is used with a singular referent (‘the king’). But how do we know that use of the plural verb form (rather than the singular) is motivated by politeness rather than by feature structure?

- (26) Hēmeís, ho basileús, eímetha ikanopoiēménoi
 We the king are pleased (pl)
 ‘I, the king, am pleased’

One indication that politeness motivates in the choice for a plural verb can be seen in analyzing the agreement. Whereas morphologically motivated neutralization affects only the finite verb, neutralization motivated by politeness can carry over to other elements in the sentence such as the pronoun. In (26), for example, the first person plural pronoun *hēmeis* ('we') is used rather than the first person singular pronoun. Also, the adjective *ikanopoiēmēnoi* ('pleased') carries plural inflection, despite the singular reference of the utterance. The fact that the plural form is also chosen for the pronoun and the adjective suggests that the use of the plural verb *eímetha* ('are') was motivated by politeness because syncretisms motivated solely by feature structure, only affect the finite verb.

A second piece of evidence supporting the notion that politeness motivates neutralization has to do with socio-pragmatic conditioning. Polite forms are first triggered in socio-pragmatic circumstances which deviate from the circumstances in which neutralization is motivated by feature structure. When polite forms first arise, their use often corresponds with the level of face one wishes to convey. In 3.2, we saw that face-threatening acts imply a threat of the negative or positive face of the hearer. For example, criticisms threaten the positive face of the hearer. Speech acts that intend to induce action from the hearer (for example commands and direct requests) threaten the negative face of the hearer. Politeness strategies help maintain positive face on behalf of the hearer. The necessity to use face-threatening acts corresponds with three factors: power difference between the speaker and addressee, the intimacy between the speaker and the hearer; and the content of the utterance (Brown & Levinson 1987: 76). In the following, we will address these contexts, individually.

The first factor, power difference, implies that the greater the difference in power between addressee and the speaker is, the more likely a speech act will be considered as face threatening. Addressing a king, for example, requires more redressing strategies than addressing a child. The second factor, intimacy, means that more intimacy between the speaker and the hearer, the less likely the need to use a face threatening act. People who know each other well can rely on fewer politeness strategies than when strangers who speak with each other. The third factor that increases the likelihood of using a politeness strategy has to do with the extremity of the utterance. To ask someone if he has murdered his aunt, for example, is more face threatening than asking someone if he would like another cookie. Naturally, face saving strategies are more necessary in the prior situation than in the latter.

In short, we expect politeness motivated neutralizations to occur first and most frequently, when powerful people are addressed in formal situations, where

people do not know each other very well, and when the content of the utterances is extreme. Asking a king if he will start a war is likely to trigger a polite form. An informal request by a parent to a child is much less likely to trigger the use of a polite form. Whereas neutralization motivated by politeness occurs first in formal situations, we saw in 2.3, that morphology-internally triggered deflection occurs first in informal situations.

A very precise operationalization of the correlation between the level of the face threatening act and the use of polite inflection can be found in Listen (1999). The examples offered by Listen are remarkable because they describe a case in which politeness motivates the use of a plural form of inflection without a trigger in the subject. Listen (1999) shows that polite inflection frequently co-occurs with requests. In general, requests are considered more face threatening than non-requests since requests require action from the hearer.

Specifically, Listen (1999) describes a politeness strategy in Low German (from 1500-1652) and in High German (from 1537-1698) where speakers combine the use of plural inflection a singular title of abstraction (Listen 1999: 30-33, 124-138). In (27), we see that singular abstractions, such as *Ihr Excellenz* ('Your Excellency') combine with third person plural inflection *müssen* ('have to') instead of with the singular inflection *muss* ('has to').

(27)	Ihr	Excellenz	müssen	die Abschaffung	des
	'Your	Excellency	must-PL	the discontinuation	of
	Zolls	mit	eigener	hand	confirmieren.
	the tariff	with	own	hand	confirm

'Your Excellency must-PL confirm the discontinuation of the tariff with [your] own hand.'

(Listen 1999: 127)

The use of plural inflection in combination with a singular noun is striking, since it is a form of overgeneralizing the marked plural form. We expect morphologically-motivated overgeneralizations to move in the direction of the unmarked singular form. Singular forms are default.

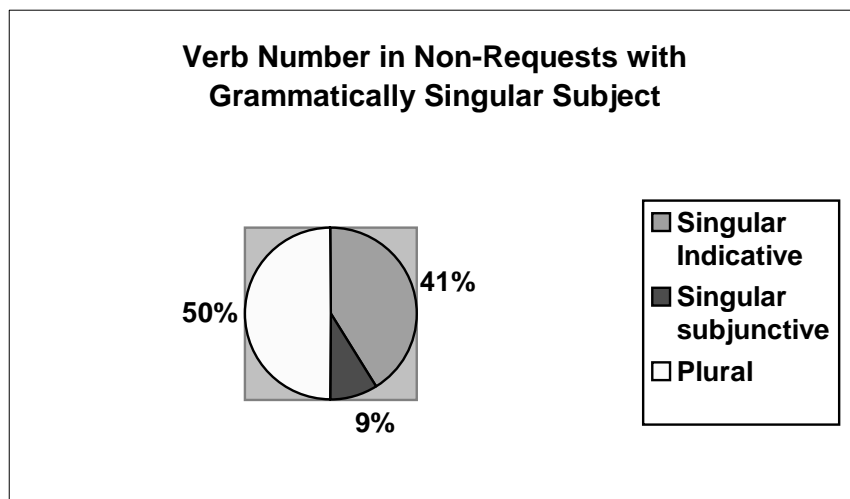
Listen (1999) shows that the chance of attesting a plural form in combination with a singular title or abstraction increases in case of request. We expect politeness-related overgeneralizations to increase in the context of requests.

Morphology-internally motivated overgeneralizations are not expected to be contingent upon this distinction.

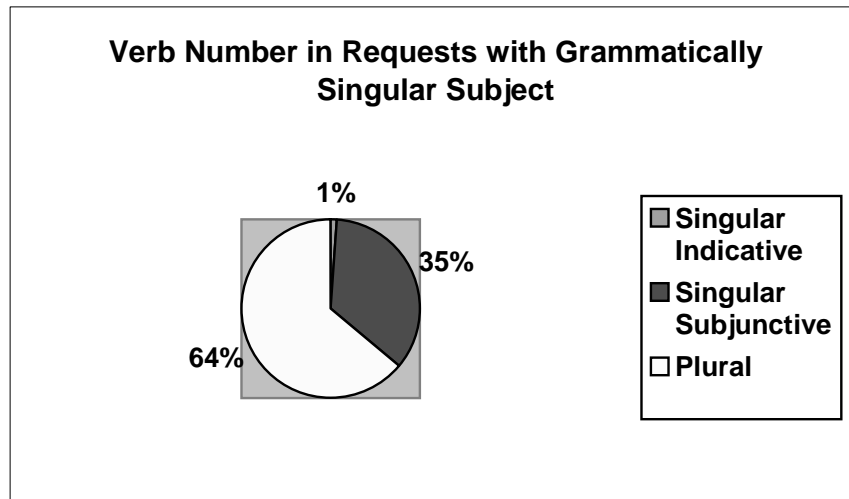
Data from Listen (1999: 129) are presented in (28) and (29). In (28), we present agreement forms in combination with singular subjects in non-requests, and in (29) with requests. Three types of finite verbs are attested: the singular indicative, the singular subjunctive, and the plural indicative. The preference for the type of finite verbs relates to the distinction request versus non-request supporting the claim that the use of the plural is motivated by politeness rather than by morphology-internal factors.

(28)

Verb number agreement with grammatically singular subject in non-requests (based on Listen 1999: 129)



- (29) Verb number agreement with grammatically singular subject in requests
(based on Listen 1999: 129)



Listen (1999) shows that the singular indicative in combination with requests is almost non-existent, whereas the singular indicative is used almost half of the time in non-requests. If we look at the table in (28), we see that singular subjects combine with the singular indicative in 41% of non-requests. The table in (29) shows that the use of singular indicative agreement in combination with a grammatically singular subject decreases to 1% with requests. In these cases, the singular subject combines with the subjunctive or a plural. The contingency upon the distinction between requests and non-request supports the role of politeness in the choice for the finite verb.

Once polite forms become conventionalised, they are no longer used to redress face threatening acts (cf. Brown & Gilman 1989, Walker 2005). Conventionalized use of polite address terms means that some situations require polite address forms independent of the face threatening level of the speech act. For example, in present day German, if there is a high social distance between two interlocutors, the polite address form is almost always used (Clyne, Kretzenbacher, Norrby & Schupbach 2006b: 314). Since the polite address form is already used when there exists distance between speaker and hearer, the use of the polite address form cannot function further to redress other face saving acts. Since the polite

address form is obligatorily used, both in non-requests (as in (30)) and in requests (as in (31)), the use of the polite address form *Sie* does not make the request increase positive face on behalf of the hearer. Instead, the use of the second person non-polite pronoun and singular inflection might come across even more rude. In order to redress the face threat which was brought on by request, additional strategies are now required, for example, in present-day German one might add the word *vielleicht* ('perhaps') (cf. Brown & Levinson 1987: 136, 153) to a request.

- (30) Ich werde es gleich für Sie machen
 I will it directly for you (V) do
 'I will do it for you directly.'
- (31) Können Sie mir helfen?
 Can you (V) me help?
 'Can you help me?'

Although face threatening acts constitute the best evidence for politeness strategies leading to patterns, more conventionalized use of address forms and polite inflection also have a specific distribution that differs from the distribution of morphologically motivated overgeneralizations. We are most likely to find overgeneralization motivated by politeness in formal speech, towards people with status and in the absence of intimacy. As we saw in 2.3, morphologically motivated neutralization is most likely to occur in informal speech.

In short, we have seen two types of independent empirical evidence for the role of politeness. The first form of empirical evidence is agreement. In most cases, the politeness strategy to use plural forms or a third person form for singular speech act participants does not only affect the verb, but also the subject (pro)noun. Spontaneous deflection in the verbal paradigm affects only the verb itself. The second form of independent empirical evidence for the role of politeness in the choice for an inflectional marker is the socio-pragmatic distribution of the form. Polite forms tend to be used in formal situations, towards addressees with power. In contrast, spontaneous deflection is associated with informal situations.

4 Summary

In this chapter, we looked at three sources of syncretism in verbal inflection, namely morphology-internal sources, phonology and politeness. Morphology-internal sources of syncretism can explain cross-linguistic tendencies in the patterning of syncretisms. Non-morphological sources of syncretisms can yield similar results as

the morphology-internal sources of syncretisms but they can also yield deviations from the more general patterns. Denial of non-morphological factors in the creation of syncretism may yield debatable morphological generalizations. At first, it might seem that allowing several explanations to describe a single phenomena does nothing more than make the theory unfalsifiable. To maintain a theory that is falsifiable, we explored different pieces of independent evidence which suggest that non-morphological sources yield syncretisms.

In section 2, we first looked at morphology-internally motivated syncretisms. We related cross-linguistically common forms of syncretism to a learning strategy that limits the number of features specified in a language to those features that are necessary to account for inflectional contrasts in the input. Language learners only assume inflectional categories on the basis of contrasts provided in the input. Not all combinations of feature values are assumed at once. Rather, learners apply limited paradigm splitting. Only the category that is highest in the hierarchy of functional elements is expressed, and if more categories are expressed, this occurs first in unmarked values.

With respect to features that are directly relevant to this study, namely person and number we saw the following: If person is neutralized there are three paths of deflection, number is neutralized all together (i), first and second person group together (ii), or second and third person group together (iib). Number values are lost in the following order: trial > dual > plural > singular. If we look at the combination of the features person and number we see two types of dependency. Person can neutralize number and vice versa. If number depends on person, this is related to the rise of agreement. Plurality first grammaticizes on animate subjects such as first person and only later on less animate subjects such as third person. In languages that are deflecting, and where number third person encodes the plural, we expect number to neutralize person. In this latter group of languages, number marking on third person is acquired early because third person is the most frequent and because it is the most general form. Following the animacy hierarchy, plural marking on third person implies number marking on the more animate first and second person.

Deviations from feature structure can have at least two sources, namely phonology or pragmatics. In section 3, we looked at the role of phonology in the neutralization of inflectional distinctions. Two factors can evidence the role of phonology in the loss of inflectional distinctions: phonological conditioning of the neutralization effects or (2) effects of a similar phonological change outside the domain of inflectional morphology.

In section 4, we zoomed in on evidence for the role of one specific source of pragmatically motivated syncretism, namely politeness. There are two types of independent evidence for the role of politeness in the creation of syncretisms, namely agreement and socio-pragmatic conditioning.

The two forms of independent evidence for the role of politeness in the inflectional paradigm influenced the set-up of chapter 3. In chapter 3, we will look at the effects of politeness on the Dutch verbal paradigm by looking at changes in the pronominal paradigm. This approach has two advantages: If a change in the verbal paradigm is connected to a change in the pronominal paradigm, this provides one piece of evidence for the role of pragmatics in choosing an inflectional marker. Moreover, the socio-pragmatic distribution of pronouns is better documented than the socio-pragmatic distribution of verbal inflection markers. Finally, we presented a second piece of evidence for the role of politeness in the formation of syncretisms which was based on socio-pragmatic conditioning.